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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of :

Peter DROESCHER et al. Group Art Unit: 1616

Serial No.: 09/963,680 Examiner: QAZI, Sabiha Naim

Filed: September 27, 2001

For: 17-METHYLENE STEROIDS, PROCESS FOR THEIR PRODUCTION AND PHARMACEUTICAL COMPOSITIONS THAT CONTAIN THESE COMPOUNDS

BRIEF ON APPEAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Services as First Class Mail in an envelope addressed to: Commissioner of Patents, P O Box 1450, Alexandria, VA 22313-1450 on: March 19, 2004
Name: Gaba Hunter
Signature:

Sir:

Further to the Notice of Appeal filed on November 17, 2003, and the Advisory Action mailed on February 17, 2004, herewith are three copies of Appellants' Brief On Appeal. The attached check includes the statutory fee for the filing of this Brief and any necessary extension fees. The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

This is an appeal from the decision of the Examiner rejecting claims 20 to 22 of the above-identified application.

(1) REAL PARTY IN INTEREST

The real party in interest in the present application is Schering AG, to whom the present application was assigned on February 28, 2003. The assignment is recorded at Reel/Frame: 013909/0001.

(2) RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any related appeals.

(3) STATUS OF THE CLAIMS

Claims rejected: 20 - 22

Claims allowed: 1 - 8, 10 - 19 and 23 - 26

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Claims canceled: 9

Claims withdrawn: none

Claims objected to: none

Claims on Appeal: 20-22. A copy of the claims on appeal is provided in the attached Appendix, along with a copy of allowed claim 5 from which the appealed claims depend.

(4) STATUS OF AMENDMENTS AFTER FINAL

Amendments after final filed on December 15, 2003, were entered.

(5) SUMMARY OF THE INVENTION

Appellants' invention is directed to 17-methylene steroids and pharmaceutical compositions that contain them, processes for their production and use. The 17-methylene steroids of the invention have a hybrid-type profile of action in the sense that they act as inhibitors of 5α-reductase and simultaneously as gestagens. They are, therefore, suitable for treating diseases that are the result of elevated androgen levels in certain organs and tissues in men and women. See page 1 of specification, line 7 to page 2, line 9.

(6) ISSUES

The issues outstanding in this application are:

(1) the rejection under 35 U.S.C. § 112, first paragraph, i.e., whether claims 20-22 are enabled.

(7) GROUPING OF THE CLAIMS

For the purpose of this appeal all claims stand or fall separately.

(8) APPELLANTS' ARGUMENTS

Rejected claims 20, 21 and 22 are directed to uses of the small genus of compounds that were allowed in claim 5. The reason given for their rejection in the Advisory Action dated February 17, 2004, is that there is "no example to support the method of treatments as claimed."

The requirement for examples of treatment in a patent application is contrary to law. An applicant is not required to demonstrate "treatments" of diseases that are claimed. See *In re Brana*, 51 F.3d 1560, 34 USPQ2d 1441 (Fed. Cir. 1995), stating that the "stage at which an

invention in this field becomes useful is well before it is ready to be administered to humans," e.g., well before an example of treatment stage.

Additionally, there is no requirement for any examples in patent applications. See, for example, *In re Marzocchi*, 169 U.S.P.Q. 367 (1971), stating that "an enabling teaching is set forth, either by use of illustrative examples or by broad terminology, is of no importance." (Emphasis added.) The MPEP in agreement with this by stating that "compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed." (Emphasis added.) See MPEP § 2164.02.

Based on this alone, reversal of the rejections is warranted. Nevertheless, appellants will address the allegations concerning these rejected claims as presented in the Final Office Action dated July 15, 2003.

Primarily, a rejection to the utility of the invention should not be couched in a rejection under 35 USC § 112, first paragraph, but as a rejection over the practical utility under 35 USC § 101, or at most as an enablement rejection in conjunction with a practical utility rejection.

A deficiency under 35 U.S.C. § 101 can also create a deficiency under 35 U.S.C. 112, first paragraph, because the "how to use prong of section 112 incorporates as a matter of law the requirement of 35 U.S.C. Section 101 that the specification disclose as a matter of fact a practical utility for the invention," see *In re Ziegler*, 992 F.2d 1197, 1200, 26 USPQ2d 1600 (Fed. Cir. 1993). Stated otherwise, if a claimed invention does not have utility, the specification cannot enable one to use it. See *In re Brana*, supra. The converse is, however, not true. MPEP § 2107 is in agreement with the above-cited decisions and states that "office personnel should not impose a 35 USC § 112, first paragraph, rejection grounded on a 'lack of utility' unless a 35 USC § 101 rejection is proper." The Examiner, contrary to the guidance of the law and the MPEP, makes a section 112 rejection supported by allegations consistent with a section 101 rejection without making a section 101 rejection, thereby imposing a higher burden on appellants to overcome the rejection, e.g., the burden to overcome an enablement rejection is higher than the burden to overcome a utility rejection.

Under the combined sections 101 and 112, first paragraph, rejections scenario, the CAFC indicated that the "PTO cannot make this type of rejection, ... unless it has reason to doubt the objective truth of the statements contained in the written description," for which there is no objective reason in the present case. (Emphasis Added.) See *In re Cortright*, 49

USPQ2d 1464 (CAFC 1999), citing *Brana*, supra. Moreover, since there is no section 101 rejection, the allegations are improper and/or irrelevant under section 112, first paragraph. For this reasons as well, the rejection should be withdrawn.

In a proper enablement rejection, which is not made here, first and foremost, a specification disclosure which "contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support." (Emphasis added.) *In re Marzocchi*, supra. "The PTO must have adequate support for its challenge to the credibility of appellant's statements of utility". (The quoted statement was made in the context of enablement, i.e., the how-to-use requirement of the first paragraph of section 112.) See also *In re Bundy*, 642 F.2d 430, 209 USPQ 48, (CCPA 1981). The only relevant concern of the Patent Office should be over the truth of assertions relating to enablement. The first paragraph of section 112 requires nothing more than objective enablement. See *In re Marzocchi, supra.*

The Examiner has not established any basis to doubt objective enablement. The Examiner has also provided no support for establishing that one of ordinary skill would doubt the objective truth of the asserted utility, which is enabled by the specification. The enablement rejections by the Examiner are thus unfounded. The rejection therefore was improper under *In re Marzocchi.*

The claims rejected are directed to the treatment of prostate diseases (claim 20), to effecting contraception (claim 21), and to inhibiting 5α-reductase (claim 22), i.e., to treatments and activities that are not objectively doubtable. Doubt has been held reasonable only where, for example, the invention has been characterized as "highly unusual," *In re Houghton*, 433 F.2d 820 (CCPA 1970), as "incredible," *In re Citron*, 325 F.2d 248, (CCPA 1963), or as "too speculative," *In re Eltgroth*, 419 F.2d 918 (CCPA 1970). Because compounds having similar therapeutic activities are known in the art, the existence of a new class of compounds having the claimed activities is not objectively doubtable, i.e., not "highly unusual," "incredible," and/or "too speculative."

In any event, appellants provide adequate guidance in the specification for one of ordinary skill in the art as to how to proceed in using the claimed invention. Appellants teach that compounds according to the invention have a hybrid-type profile of action. They

are inhibitors of 5α-reductase and, moreover, also act as gestagens. They are therefore suitable for treating diseases that are the result of elevated androgen levels in certain organs and tissues in men and women.

See page 8, 3rd paragraph. The specification on page 8, 4th paragraph states that

> The simultaneous presence of a gestagenic action in compounds according to the invention results in an inhibition of gonadal function in males and females. This effect is desirable if an antifertile action or else an inhibition of the hormone secretion of the gonads is to be achieved with the treatment. This is frequently the case in diseases of the prostate (benign prostate hyperplasia).

On page 9, first two paragraphs, the specification teaches that the compounds of the invention can be used as contraceptives.

Additionally, appellants provide guidance as to how the activities of the compounds can be determined by demonstrating in an example in genital germal homogenates the 5α-Reductase-Type 2-Activity of one of the compounds of claim 5. See table 1 on page 11. Appellants also provide *in vivo* data for gestagenic activity of the same compound. See table 2 on page 11. One of ordinary skill in the art through routine testing of the compounds, can determine the activity level of each of the twelve remaining compounds in the same manner as the activity level of the one tested was performed. The Office Action offers no reason or evidence to support any doubt as to why the compounds whose activity level is not taught in the specification would not have the asserted utility. Instead, the Examiner improperly requires examples of treatments as claimed. Such examples as discussed above are not required for purposes of enablement.

Without proper reason or evidence to doubt the objective truth of the enabling disclosure, the Examiner improperly requires evidence to prove utility and/or to support enablement. "Only after the PTO provides evidence showing that one of ordinary skill in the art would reasonably doubt the asserted utility does the burden shift to the applicant to provide rebuttal evidence sufficient to convince such a person of the invention's asserted utility." *See In re Bundy*, supra. The burden has not been shifted. Thus, appellants are not required to provide rebuttal evidence.

With regard to *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988), used by the Examiner as the basis of the rejection, the court therein teaches that whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations. Factors to consider whether a disclosure requires undue experimentation is summarized to include the eight *Wands* factors (not reproduced here). No factor alone is determinative. The court in *Wands*, further held that the test is not

merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed. Appellants have provided adequate guidance.

Appellants address the allegations with respect to the *Wands* factors as well.

With respect to the predictability in the art, the Office Action alleges that the unpredictability in the art of steroids is very high. No support for this allegation is provided by the Office Action.

The Office Action further alleges that it would require a "case to case ... painstaking experimental study" to determine the activity levels of the claimed compounds. As discussed in *Wands*, supra, "considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed." Here, the specification provides assay data on activity and *in vivo* data for one of the thirteen compounds whose utilities are subject of the rejected method claims. In a similar fashion, one of ordinary skill in the art by performing the same or similar tests, can, by routine experimentation, determine the activity levels of the remaining compounds.

The Office Action alleges that the specification provides "no guidance" in the way of written description. Contrary to this allegation, appellants provide more than sufficient guidance, such as described assays and test data, to objectively enable one of ordinary skill in the art to practice the invention. Furthermore, written description to the entire claimed subject matter can be found in the specification.

The Office Action also cites to a variety of references to support the rejections, which are addressed next.

The Examiner's reliance on *In re Dreshfield*, 110 F.2d 235, 45 USPQ 36 (CCPA 1940) is misplaced. *Dreshfield* does not involve an enablement rejection of method of use claims, or as a matter of fact of any type of claims. The claims involved were compound claims that were broader than the original disclosure and were rejected for being broader than the original disclosure. See holding, i.e., "we are of the opinion that claims 15, 16, and 17 were properly rejected by the Primary Examiner on the ground that they are broader than appellant's original disclosure." Claims 15, 16, and 17 were the claims that were rejected by the Examiner as containing antioxidants whose "effectiveness ... could be determined only by experiment." The term "antioxidants" were conceded by appellant's counsel to contain antioxidants used in a large

number of industries. Additionally counsel conceded that "both the physical and chemical nature of the materials under consideration differs ... markedly from materials in other industries where anti-oxidants were known to be needed." The facts of *Dreshfield* are very different from the facts of the current case, and thus, the holding therein is irrelevant here.

Additionally, as a side note, the language referred to by the Office Action from *Dreshfield* has been limited by later decisions. See, for example, the CCPA stating that "it may not be necessary to enumerate a plurality of species if a genus is sufficiently identified in an application by "other appropriate language." See *In re Grimme*, 247 F.2d 949, 124 USPQ 499 (CCPA 1960), discussing *Dreshfield*. Here, the claimed material is a small genus of named compounds.

The present situation can further be distinguished from *Dreshfield*. The method claims here depend from an allowed compound claim. The utilities to which the methods are directed are disclosed in the specification. The claims are thus, not broader than what is disclosed.

The Office Action states that the disclosure contains only one example. This example is the one discussed above which demonstrates the activities of one of the compounds. The Office Action offers no evidence or reasoning why the example would not be representative and sufficient. Nor does the Office Action present any rationale as to why examples are required.

Instead the Office Action cites to *In re Shokal*, 242, F.2d 771, 113 USPQ 283 (CCPA 1957) and *In re Grimme*, supra, for the proposition that a single species is seldom sufficient to support a generic claim. However, the allegation is irrelevant to the present situation. The cited cases do not deal with method of use claims of otherwise allowed specific compounds. Instead they deal with the situation where only one compound is named in the application, and at the same time a broad generic claim is prosecuted. Here, appellants have a claim that is directed to a small genus of compounds, which are clearly identified by name in the specification. Compound claim 5 and also other broader compound claims are already allowed. The rejection of the method claims does not even involve a generic claim as the methods of use claims are directed to the use of the specific compounds of claim 5.

The Office Action also cited *In re Tiffin*, 171 USPQ 294 (CCPA 1971) and alleges that a showing limited to a single species can hardly be considered probative of an invention's nonobviousness in view of the breadth of the claims. This allegation is also irrelevant to the situation. This is not an "obviousness" rejection, but a section 112, first paragraph, enablement rejection. In *Tiffin*, the appellants claimed *prima facie* obvious subject matter and their rebuttal evidence of unexpected results was limited to a single species which was not adequate to overcome the obviousness rejection. The facts of *Tiffin* are so different from the present

situation, including the type of rejection made, that the holding therein is irrelevant to the present case.

Appellants instead point to the facts of *In re Bundy*, supra, which are relevant here. The specification in that case disclosed only that the compounds of the invention possess activity similar to E-type prostaglandins; no examples were provided. Nevertheless the court found that sufficient guidelines as to use were given in the disclosure. The court held that "what is necessary to satisfy the how-to-use requirement of section 112 is the disclosure of some activity coupled with knowledge as to the use of this activity." (Emphasis added.) Appellants have done at least that in the present case, and thus, satisfied the how-to-use requirement of section 112.

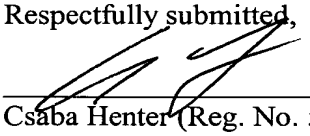
Separate consideration of the three appealed claims is respectfully requested as each method claims is directed to a different method, each of whose enablement is dependent on different parts of the application.

Appellants provided adequate support and evidence to enable the method claims.

(9) CONCLUSION

For all of the above reasons, it is urged that the decision of the Examiner rejecting claims 20 to 22, on appeal, is in error and should be reversed.

Respectfully submitted,



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Attorney Docket No.: JENA-1
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APPENDIX A

The claims:

Claim 5. A17-Methylene steroid selected from the group consisting of

1) E-17-Chloromethylene-4-chloro-estr-4-en-3-one,
2) E-17-Cyanomethylene-4-chloro-estr-4-en-3-one,
3) Z-17-Cyanomethylene-4-chloro-estr-4-en-3-one,
4) Z-17-(1')-Cyanoethylidene-4-chloro-estr-4-en-3-one,
5) Z-17-Ethylidene-4-chloro-estr-4-en-3-one,
6) E-17-Ethylidene-4-chloro-estr-4-en-3-one,
7) E-17-Bromomethylene-4-chloro-estr-4-en-3-one,
8) Z-17-Chloroethylidene-4-chloro-estr-4-en-3-one,
9) Z-17-Bromoethylidene-4-chloro-estr-4-en-3-one,
10) E-17-Chloromethylene-4-cyano-androst-4-en-3-one,
11) E-17-Chloromethylene-4-chloro-androst-4-en-3-one,
12) E-17-(2')-Hydroxyethylidene-4-chloro-estr-4-en-3-one, and
13) Z-17-(2')-Hydroxyethylidene-4-chloro-estr-4-en-3-one.

Claim 20. A method of treating a prostate disease comprising administering to a patient in need thereof an effective amount of a compound according to claim 5 or a pharmaceutical composition comprising said effective amount of said compound and a pharmaceutically compatible adjuvant or vehicle.

Claim 21. A method of effecting contraception in a man or in a woman comprising administering to a patient in need thereof an effective amount of a compound according to claim 5 or a pharmaceutical composition comprising said effective amount of said compound and a pharmaceutically compatible adjuvant or vehicle.

Claim 22. A method inhibiting 5α-reductase comprising administering to a patient in need thereof an effective amount of a compound according to claim 5.